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EXAMINER

BRUCKART, BENJAMIN R

ART UNIT

PAPER NUMBER

2155

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/694,599

Applicant(s)

BLOCK ET AL.

Examiner

Benjamin R Bruckart

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-15 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 7,8,16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Detailed Action

Claims 1-20 are pending in this Office Action.

Allowable Subject Matter

Claims 7, 8, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 9 is provisionally rejected under the judicially created doctrine of double patenting over claims 7 and 26 of copending Application No. 09/694,586 herein referred to as "586" in view of U.S. Patent No. 6,108,699 by Moiin. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application

since the referenced copending application and the instant application are claiming common subject matter, as follows:

Regarding claim 9, an apparatus, comprising:

- (a) a memory (586: claim 7a, 26a); and
- (b) a program resident in the memory (586: claim 7b, 26b), the program configured to dynamically modify a fragmentation size cluster communication parameter in a clustered computer system by processing a requested fragmentation size change only after receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (586: claim 7b, 26b).

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify a fragmentation size like a communication parameter as taught by application 586 while using a threads as taught by Moiin in order to allow for regulate and simplify the sending and receiving of messages (Moiin: col. 14, lines 26-29).

Claims 1-5, 10-14, 18-20 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the similarities and point to the teachings of 586.

Regarding claim 1, the two applications have preambles that share a method of dynamically modifying a cluster communication parameter in a clustered computer system. Claim 1(a) shares deferring action until receipt of acknowledged message with claim 19(b) and 24 of 586. Claim 1(b) shares with claim 1(c) of 586 “modifying cluster communication parameter.”

Regarding claim 2, the method of claim 1, further comprising sending a sync message from the source node to the plurality of target nodes (586: claims 20, 1a), wherein deferring processing of the requested fragmentation size change includes waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (586: claims 1c, 22, 19).

Regarding claim 3, the method of claim 2, wherein the sync message is configured to initiate, upon receipt by each target node, an immediate acknowledgment message from such target node that acknowledges receipt for each unacknowledged message received by such target node (586: claims 1b, 22).

Regarding claim 4, the method of claim 2, wherein processing the requested fragmentation size change includes sending a fragmentation size change message from the source node to the plurality of target nodes (586: claims 1a, 3, 6), the fragmentation size change message configured to modify the fragmentation size cluster communication parameter on each of the plurality of target nodes (586: claim 1c).

Regarding claim 5, the method of claim 4, wherein processing the requested fragmentation size change further includes modifying the fragmentation size cluster communication parameter on the source node (586: claim 19, 1a).

Regarding claim 10, the apparatus of claim 9, wherein the program is further configured to process the requested fragmentation size change after receipt of the acknowledgment message to modify a fragmentation size cluster communication parameter used in transmitting messages from the source node to the plurality of target nodes (586: claim 1a 1c), and wherein the program is further configured to thereafter send messages from the source node to the plurality of target nodes using the modified fragmentation size cluster communication parameter.

Regarding claim 11, the apparatus of claim 10, wherein the program is further configured to send a sync message from the source node to the plurality of target nodes (586: claims 20, 1a) such that deferring processing of the requested fragmentation size change includes waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (586: claims 1c, 22, 19).

Regarding claim 12, the apparatus of claim 11, wherein the sync message is configured to initiate, upon receipt by each target node, an immediate acknowledgment message from such

target node that acknowledges receipt for each unacknowledged message received by such target node (586: claims 1b, 22).

Regarding claim 13, the apparatus of claim 11, wherein the program is configured to process the requested fragmentation size change by sending a fragmentation size change message from the source node to the plurality of target nodes (586: claim 1a), the fragmentation size change message configured to modify the fragmentation size cluster communication parameter on each of the plurality of target nodes (586: claim 1c).

Regarding claim 14, the apparatus of claim 13, wherein the program is further configured to process the requested fragmentation size change by modifying the fragmentation size cluster communication parameter on the source node (586: claim 19, 1a).

Regarding claim 18, a clustered computer system, comprising:

(a) a plurality of nodes coupled to one another over a network, the plurality of nodes including a source node and a plurality of target nodes (586: claim 12a);

(b) a source program resident on the source node, the source program configured to dynamically modify a fragmentation size cluster communication parameter in a clustered computer system by sending a sync message to the plurality of target nodes (586: 12b, 26a and b), thereafter waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (586: claim 26b), thereafter sending a fragmentation size change message to each of the plurality of target nodes to modify a fragmentation size cluster communication parameter on such target nodes used in transmitting messages from the source node to the target nodes (586: claim 1a); and

(c) a target program resident on each of the plurality of target nodes, the target program configured to send an acknowledgment message to the source node in response (586: claim 7a, 7b, 20, 22), to the sync message to acknowledge receipt for each unacknowledged message received thereby, and to modify a fragmentation size cluster communication parameter associated therewith in response to the fragmentation size change message (586: claim 1, 20, 22).

Regarding claim 19, a program product (586: claim 13), comprising:

(a) a program configured to dynamically modify a fragmentation size cluster communication parameter in a clustered computer system by processing a requested fragmentation size change only after receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (586: claim 13a);
and

(b) a signal bearing medium bearing the program (586: claim 13b).

Regarding claim 20, the program product of claim 19, wherein the signal bearing medium includes at least one of a transmission medium and a recordable medium (586: claim 14).

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-5, 9-14, 18-20 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Patent No 6,108,699 by Moiin.

Regarding claim 1, a method of dynamically modifying a fragmentation size cluster communication parameter in a clustered computer system (Moiin: col. 2, lines 10-20; col. 14, lines 2-15; col. 5, lines 56-61; cluster size), the method comprising:

(a) deferring processing of a requested fragmentation size change until receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (Moiin: col. 2, lines 29-34);

(b) thereafter processing the requested fragmentation size change to modify a fragmentation size cluster communication parameter used in transmitting messages from the source node to the plurality of target nodes (Moiin: col. 2, lines 34-38, 44-50); and

(c) thereafter sending messages from the source node to the plurality of target nodes using the modified fragmentation size cluster communication parameter (Moiin: col. 2, lines 34-38, 16-20; col. 7, lines 53-61; col. 8, lines 38-51).

Regarding claim 2, the method of claim 1, further comprising sending a sync message from the source node to the plurality of target nodes (Moiin: col. 2, lines 16-20), wherein deferring processing of the requested fragmentation size change includes waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (Moiin: col. 2, lines 29-33).

Regarding claim 3, the method of claim 2, wherein the sync message is configured to initiate, upon receipt by each target node, an immediate acknowledgment message from such target node that acknowledges receipt for each unacknowledged message received by such target node (Moiin: col. 2, lines 44-50).

Regarding claim 4, the method of claim 2, wherein processing the requested fragmentation size change includes sending a fragmentation size change message from the source node to the plurality of target nodes (Moiin: col. 2, lines 16-20; petitioning node to petitioned nodes), the fragmentation size change message configured to modify the fragmentation size cluster communication parameter on each of the plurality of target nodes (Moiin: col. 2, lines 44-50).

Regarding claim 5, the method of claim 4, wherein processing the requested fragmentation size change further includes modifying the fragmentation size cluster communication parameter on the source node (Moiin: col. 7, lines 53-61).

Regarding claim 9, an apparatus (Moiin: col. 4, lines 25-32), comprising:

- (a) a memory (Moiin: col. 4, lines 26); and
- (b) a program resident in the memory (Moiin: col. 4, lines 15-18), the program configured to dynamically modify a fragmentation size cluster communication parameter in a clustered computer system (Moiin: col. 2, lines 16-20; col. 14, lines 2-15) by processing a requested fragmentation size change only after receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (Moiin: col. 2, lines 29-34, lines 44-50).

Regarding claim 10, the apparatus of claim 9, wherein the program is further configured to process the requested fragmentation size change after receipt of the acknowledgment message to modify a fragmentation size cluster communication parameter used in transmitting messages from the source node to the plurality of target nodes (Moiin: col. 2, lines 44-50; col. 2, lines 32-34; Figure 4, tag 406), and wherein the program is further configured to thereafter send messages from the source node to the plurality of target nodes using the modified fragmentation size cluster communication parameter (Moiin: col. 2, lines 34-38, 16-20; col. 7, lines 53-61; col. 8, lines 38-51).

Regarding claim 11, the apparatus of claim 10, wherein the program is further configured to send a sync message from the source node to the plurality of target nodes such that deferring processing of the requested fragmentation size change includes waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (Moiin: col. 2, lines 29-34, 44-50).

Regarding claim 12, the apparatus of claim 11, wherein the sync message is configured to initiate, upon receipt by each target node, an immediate acknowledgment message from such

target node that acknowledges receipt for each unacknowledged message received by such target node (Moiin: col. 2, lines 44-50).

Regarding claim 13, the apparatus of claim 11, wherein the program is configured to process the requested fragmentation size change by sending a fragmentation size change message from the source node to the plurality of target nodes (Moiin: col. , lines), the fragmentation size change message configured to modify the fragmentation size cluster communication parameter on each of the plurality of target nodes (Moiin: col. , lines).

Regarding claim 14, the apparatus of claim 13, wherein the program is further configured to process the requested fragmentation size change by modifying the fragmentation size cluster communication parameter on the source node (Moiin: col. 7, lines 53-61).

Regarding claim 18, a clustered computer system, comprising:

(a) a plurality of nodes coupled to one another over a network, the plurality of nodes including a source node and a plurality of target nodes (Moiin: col. 3, lines 64- col. 4, line 1; Figure 1);

(b) a source program resident on the source node (Moiin: col. 4, lines 15-18), the source program configured to dynamically modify a fragmentation size cluster communication parameter in a clustered computer system by sending a sync message to the plurality of target nodes (Moiin: col. 2, lines 16-20; col. 14, lines 2-15), thereafter waiting for an acknowledgment message for the sync message from each of the plurality of target nodes (Moiin: col. 2, lines 29-34, 44-50), thereafter sending a fragmentation size change message to each of the plurality of target nodes to modify a fragmentation size cluster communication parameter on such target nodes used in transmitting messages from the source node to the target nodes (Moiin: col. 2, lines 29-38); and

(c) a target program resident on each of the plurality of target nodes (Moiin: col. 4, lines 15-18), the target program configured to send an acknowledgment message to the source node in response (Moiin: col. 2, lines 44-50), to the sync message to acknowledge receipt for each unacknowledged message received thereby, and to modify a fragmentation size cluster

communication parameter associated therewith in response to the fragmentation size change message (Moiin: col. 2, lines 39-40).

Regarding claim 19, a program product (Moiin: col. 4, lines 25-32), comprising:

(a) a program configured to dynamically modify a fragmentation size cluster communication parameter in a clustered computer system (Moiin: col. 2, lines 16-20; col. 14, lines 2-15) by processing a requested fragmentation size change only after receipt of an acknowledgment message for at least one unacknowledged message sent by a source node to a plurality of target nodes (Moiin: col. 2, lines 29-34, 44-50); and

(b) a signal bearing medium bearing the program (Moiin: col. 4, lines 58-66).

Regarding claim 20, the program product of claim 19, wherein the signal bearing medium includes at least one of a transmission medium and a recordable medium (Moiin: col. 5, lines 9-19; col. 4, lines 28-32).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 15 are is rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 6,108,699 by Moiin.

The Moin reference teaches a system of modifying a dynamic clustering computer system consisting of petitioning and petitioned nodes that broadcast reconfigure messages (Moin: col. 2, lines 10-20).

The Moin reference does not explicitly state the use of message queues.

The Moin reference teaches the use of threads to regulate its incoming and outgoing messages all controlled from a main or kernel thread (Moin: col. 13, lines 66- col. 14, line 7)

The Moin reference further teaches some of the threads operating on the node are used to improve performance and simplify communication (Moin: col. 14, lines 26-29).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to dynamically modify cluster computer system as taught by Moin while using a message queue in order to allow for regulate and simplify the sending and receiving of messages (Moin: col. 14, lines 26-29).

Claim 15 is rejected under the same rationale given above.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U. S. Patent No. 6,047,323 issued to Krause.

U. S. Patent No. 6,192,417 issued to Block et al.

U. S. Patent No. 6,292,905 issued to Wallach et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R Bruckart whose telephone number is (703) 305-0324. The examiner can normally be reached on 8:00-5:30 PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (703) 308-6662. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0324.

Benjamin R Bruckart
Examiner
Art Unit 2155
brb
January 29, 2004

BRB


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER